The human software

It was late and David had barely finished dressing up to go to college. In the first floor, breakfast ready, was waiting his father Saúl for him, watching the news.

—David, aren't you gonna eat? —said his father while keeping his eyes fixed in the TV-Wall.

—Sorry dad, today I need to get to college a little earlier.

—Try to eat well David, that is more important than anything.

David slyly grimaced, and sat to eat. Some hunger strikes made by prisoners condemned for their work in genetic studies of humans appeared in the news.

—Do you know if Uncle Tom is also in the strike? —Asked David cutting his fried egg with a fork.

—I still don't know. The prison chief gave me permission to go visit him next week. But surely he is among them.

In this period of time, year 2073, making investigation to produce genetically-modified living organisms was a crime. The problem had started more than 30 years ago; when Young Dimitri Petralov, several times world champion of the 100 mts and that had already broken his own world record five times, was a result of a genetic experiment. The outraged press showed pictures of his ten-year-old self that presented already an adult physiognomy. The general offense experienced by the people came swiftly and the worldwide federation of athletism decided to expel Russia, the province of the participant, of the entire competition for five years.

However, the problem got out from the sports domain, to being largely discussed in the full Assembly of the world congress, which was the entity in charge of making laws for the whole humanity.

In an intense debate that lasted several days, the congress decided to take the problem to a worldwide meeting. Not only scientists but also non-scientists resolved the future of genetic engineering. The result: Prohibition of all the genetic manipulation to human embryos was voted, and only sequencing oriented to determine possible embryonic anomalies would be allowed, but nothing more.

Since then, governments decided to redirect technology towards robotics. After 30 years of banned synthetic biology, robots inhabited Earth alongside people and animals. A lot of them could replace humans in dangerous tasks and even, some of them who had huge data bases, made administration teams, not only in enterprises, but also effectively in the government.

—What classes do you have today? —Asked Saúl

—Bionic design.

—Sounds interesting, what's it about?

—I've only attended the first class. The idea, according to the professor, is to learn how to build machines that make processes only living creatures could do before. The majority are better than

nature. You know, an airplane flies better than a bird, a car travels faster than a horse, a crane can lift more weight than any muscle.

—Oh, like those robots that make surgeries.

—Simple surgeries, dad. Humans still are in charge of the most delicate surgeries. The pattern recognition hasn't gone that far and well, there is also the fear of leaving those things to robots.

—Really? But if they are programmed not to hurt humans!

—Of course. Robots cannot mess with us, as well as we should program our servants with an operating system different to the one robots have developed. But, for now, we are more adequate for those delicate procedures.

Servants were types of machines programmed by humans to help them make specific tasks for which they were designed. Robots, on the other hand, were machines that could learn and thus, improve their initial configuration. However, they could not modify their fundamental programming made by the engineers that specified they could not hurt humans. This way, possible mistakes leading to a rebellion could be avoided.

In case of a serious accident, if some of these robots started to be a problem for society, they have an emergency system that shuts them down, with a judge approval. Thus, so far, there haven't been a lot of problems.

People thought that these robots would learn very fast, soon surpassing humans but it was demonstrated that these machines needed a constant interaction with reality and even if robots' circuitry was really fast, this interaction is not able to be performed as quickly as the speed of their circuits.

However, some robots got to learn so many things that their operative system was considerably different to the one they started with and in most cases it was really difficult to decode. Thus, it was decided not to study or to modify their operative systems.

—I knew it, David, these tin machines will never be like us. We have life!

David let escape a burst of laughter, turning his eyes to the sky. Saúl stared at him with certain shame.

—Bye dad, see you at night —David left running, took his little hydrogen car and went to college.

Saúl, in his youth, was used to work in a laboratory, researching the Seriv syndrome mechanism along with his brother.

When the law that vetoed this kind of genetic research was implemented, both were severely persecuted. His brother Tom was captured and is now in prison. Saúl, on the other hand, lived hidden certain time and started a new life as a cook.

The day passed and again, father and son, were at home dining.

—These idiots are crazy! —commented David laughing and staring at the ground.

—What happened? —asked Saúl, arriving from the back.

—You won’t believe me —replied David—it’s madness.

—Speak!

-There is a new microscope in the room of microcircuit design. The idiot of William told us he started playing with it and you will not believe me.

—Yes… so!

—He observed, through the microscope, a sample of semen!... his OWN semen—David started laughing.

Saúl drew a small grin in his face and seemed to laugh.

—Didn’t they teach you that in school? —Asked Saúl

—Yes, we sort of knew how it is but this type of biology is prohibited, you know. Don’t bother, instead look at the pictures he took with the microscope! —David took his phone and pressed some buttons. The images were projected in the wall-TV.

—Are these supposed to be his spermatozoids?

—His what?

An image of what seemed to be some shapeless and isolated cells were shown on the TV. Undoubtedly that wasn’t normal. Saúl got up and looked closer to the screen, adjusted his glasses and put his hand on his bold head. He frowned.

—Son, do they sell packages for blood sampling at the drugstore?

Some days had passed and Saúl was waiting to speak with his brother.

—You can come in Mister Grandson —said the robot receptionist—your brother is waiting for you.

—Thank you! —said Saúl. He suddenly realized– Sure thank you, it is just a tin machine! —he said to himself.

He entered into the room and could see his very skinny brother Tom sitting in front of a table and staring absorbed towards nothing.

—Didn’t mom tell you to eat your soup? —Said Saúl, sitting with an uncomfortable laughter.

—Bullshit society, Saúl —said Tom incensed— we will continue in strike until they realize the big mistake they are making with this absurd law.

—You know I'm a pessimist, I have already started your funeral. Robots have made people forget the Petralov law. I do not see hope in your efforts —Tom began to hit the tip of his fingers on the table, Saúl continued— Can you believe that David does not know what is a spermatozoid?
Tom seemed to wake up and looked incredulous at Saúl.

—this is absurd —said Tom

—I know and I have been thinking about it. But I came to tell you something worst and i need your help. Above all I need you alive so, please —Saúl approached his face staring straightly at Tom— Eat something! —Tom blinked without making any movement.

—Let's see. What else can be worse than your child not knowing something you knew at the age of six? —Tom settled himself comfortable on the chair and wrapped his head with his weak, brown arm.

—I suspect these young men have problems with their sperm. At the beginning it seemed foolish, but I can see it clearly now. Youngsters' birthrate, at least in this province, has decreased a lot during recent years, but people still insist it's all because they don't want to have children. I believe there's something else. Maybe a disease.

—Genetic tests are still available. I don't see what I have to do with that —said Tom while crossing his arms

—There are tests but just for diagnosing known diseases. I suspect this one is new.

Tom stretched his mouth and abandoned the chair. He walked slowly from side to side. He got up to Saúl's ear and whispered

—Look for Roger. He lives in the Piedra Negra lodge.

Tom took his brother by the shoulders and both knew there was nothing else to say. They embraced.

—I will keep this until the end. If the outcome is sad, when we rejoin —he turned his eyes up and smiled— I will emphatically apologize to my mother for not eating my soup.

—You're an idiot, Tom.

They hugged again.

Saúl went to Piedra Negra. The laboratory was hidden inside a cave ancient hermits built. They seeked not to have any access to internet so that they could not be tracked by robots designed to intercept communications of any kind of law violation. Time later, he discussed the results with Roger.

—Without any doubt, Saúl, we are facing something new —said Roger while grabbing his cup of coffee.

Saúl bent his head down waiting Roger to keep on talking —what do you mean?

—In the blood samples you provided us we found a new type of Virus. Apparently, it attacks exclusively male gametes. It owns a rare mechanism that makes it undetectable to the immune system. We are researching that.

—Really weird. I have never heard of something similar.

—We neither, but its ability to spread is very high. It seems that it can overcome dry environments, not as good as influenza, but in a similar way.

—Are we facing a plague without noticing?

—Indeed, Saúl. Some of us have it as well. We are looking for a treatment.

Saúl felt a shiver and started to sweat. Roger continued.

—The strangest thing about it is that the virus doesn't seem to have any natural causes.

—I don't understand.

—The genes that compose the virus do not naturally appear out there. They have been designed.

—Who could have done such thing?

—We have some suspicions. The genes of the virus are of the latest technology. Only a few laboratories worked with them even before Petralov law came into force. Most of those people are now dead, prosecuted or hidden. Only the information on their databases is left, and well, what we have inferred studying the virus.

—So, the one who did it knew the studies.

—Not only knew them, but also learned to apply them properly.

—A robot?

Roger raised his arms exposing his palms —I didn't say it, Saúl. You did!

—We must take this case to the global congress.

—Do you honestly think a cook like you has any voice there? You are supposed to be the pessimist.

Saúl looked deeply in Roger's eyes. He felt fear. Roger drew an encouraging smile on his face.

—Tom and the other colleagues in prison will include this caution alert on their hunger strike negotiation. I hope we can do something from there.

—Thank you, Roger —Saúl recovered his breath— People like you are always the ones who save the world.

—Humans insist on avoiding to take action into robot's operating system —Said Roger right after taking a sip of coffee—, but they have forgotten we have our own operating system. Our genes. We must focus on knowing and investigating them responsibly in order to know what to do in cases like this. It is true that knowing the mechanism of life is, without any doubt, a huge responsibility, but its knowledge must be regulated, not forbidden. Even though we as scientists understand that, people out there is full of prejudices and fear. We have a long way to go through, but I am confident that after realizing what these machines are capable of doing to us, we will join together and take reasonable decisions. I am confident that things will go better.

—Then it isn't as bad as I figured.

—If crisis are properly controlled, they can lead to big revolutions. Something like this is needed for the system to be changed.

They shook hands.

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